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EXAMINER

EGAN, BRIAN P

ART UNIT

PAPER NUMBER

1772

13

DATE MAILED: 01/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,488

Applicant(s)

OTA ET AL.

Examiner

Brian P. Egan

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-4, and 8 are rejected under U.S.C. 102(b) as being clearly anticipated by JP 07-266517 (assigned to Toppan Printing Co., Ltd.).

JP '517 discloses a laminated plastic molded body being a three-layered or five-layered (Configurations of A/B/A, A/C/B/C/A, A/B/D/B/A, A/E/B/E/A, etc.; see pages 5-6) laminated plastic molded body in which a resin layer A and a resin layer B are laminated alternately (see pages 5-6), and the resin layer A is a polyethylene terephthalate resin layer (p. 10, lines 37-39) and the resin layer B interposed between the resin layer A is a polyolefin resin layer having a cyclic olefin component ("annular olefin"; p.10, lines 39-40). The total weight of the polyolefin resin layer having the cyclic olefin component (resin layer B) is 5-60% by weight (p. 1, lines 40-42). The plastic molded body is a plastic container comprising a hollow biaxially drawn blow molded body (p.3, lines 26-29; p.11, line 9).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 1772

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-06-285960 (assigned to Yamato Esuron K.K.) in view of JP-07-080919 (assigned to Toppan Printing Co., Ltd.), Taniguchi et al. (#4,778,842), and Hahn (#4,496,408).

JP '960 teaches a laminated plastic molded body being a three-layered laminated plastic molded body (p.1, lines 11-12) in which a resin layer A and a resin layer B are laminated alternately, and the resin layer A is a polyethylene terephthalate resin layer ("thermoplastic polyester layer, PET"; p. 1, lines 36-37), and the resin layer B interposed between the resin layers A is a polyolefin resin (p.4, lines 15-19). The laminated plastic molded body is a hollow blow molded body wherein the hollow blow molded body is a cylindrical body further constituting a trunk portion of a tube container (p. 1, lines 24-26; p. 2, lines 17-20 (with respect to the limitation of being "hollow"); p.11, Drawing 1).

JP '960 fails to teach that the multi-layer body is biaxially drawn and also fails to teach the use of a cyclic polyolefin and the percent compositions of resin layers A and B.

JP '919 teaches a blow-molded container using 5-60 mol% cyclic polyolefin. JP '919 uses cyclic olefin for the purpose of providing the article with excellent transparency, steam barrier nature, thermal resistance, and rigidity (p. 6, lines 15-16). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicant's invention was made to have used a cyclic polyolefin in making a container for the purpose of providing an article with excellent transparency, steam barrier nature, thermal resistance, and rigidity as taught by JP '919.

Art Unit: 1772

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified JP '960 by using a cyclic polyolefin in the range of 5-60 mol% for the central polyolefin layer of the multilayered container as taught by JP '919 in order to attain excellent transparency, steam barrier nature, thermal resistance, and rigidity.

Taniguchi et al. teach a polyester resin composition that is used in plastics (Col. 1, lines 16-17) wherein the resin contains 40-80 parts by weight of polyethylene terephthalate type polyester, 20-60 parts by weight of a poly(1,4-butylene terephthalate) type polyester, and a metal salt of a copolymer (see Abstract). Taniguchi et al. teach the aforementioned composition for the purpose of providing a polyester resin composition exhibiting excellent impact resistance and moldability (see Abstract). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicant's invention was made to have used a polyester resin with 40-80 parts by weight of polyethylene terephthalate type polyester, 20-60 parts by weight of a poly(1,4-butylene terephthalate) type polyester, and a metal salt of a copolymer for the purpose of providing a polyester resin composition exhibiting excellent impact resistance and moldability for a plastic container as taught by Taniguchi et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified JP '960 by using a polyester resin composition as taught by Taniguchi et al. in order to provide a polyester resin composition exhibiting excellent impact resistance and moldability for a plastic container.

Finally, Hahn teaches a method for producing biaxially oriented hollow containers (see Abstract; Figs. 8-9). Hahn teaches that the method can be used for polyesters including

Art Unit: 1772

polyethylene terephthalate as well as polyolefins (Col. 4, line 55 to Col. 5, line 2). Hahn biaxially orients the molded layers of the hollow article for the purpose of enhancing the strength properties of the container (Col. 1, lines 13-25). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicant's invention was made to have biaxially oriented the plastic layers of a container wall for the purpose of enhancing the strength properties of the container as taught by Hahn.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified JP '960 by biaxially orienting the layers of the laminated plastic body of the container as taught by Hahn for the purpose of enhancing the strength properties of the container.

5. Claims 2, 5-7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-266517 (assigned to Toppan Printing Co., Ltd.) in view of Taniguchi et al. (#4,778,842) and Hahn (#4,496,408).

The teachings of JP '517 are relied upon as detailed above. JP '517 fails to teach the composition of the polyethylene terephthalate layer. JP '517 is also silent as to whether the laminated plastic molded body is cylindrical.

Taniguchi et al. teach a polyester resin composition that is used in plastics (Col. 1, lines 16-17) wherein the resin contains 40-80 parts by weight of polyethylene terephthalate type polyester, 20-60 parts by weight of a poly(1,4-butylene terephthalate) type polyester, and a metal salt of a copolymer (see Abstract). Taniguchi et al. teach the aforementioned composition for the purpose of providing a polyester resin composition exhibiting excellent impact resistance and moldability (see Abstract). It would have been obvious through routine experimentation to one

Art Unit: 1772

of ordinary skill in the art at the time applicant's invention was made to have used a polyester resin with 40-80 parts by weight of polyethylene terephthalate type polyester, 20-60 parts by weight of a poly(1,4-butylene terephthalate) type polyester, and a metal salt of a copolymer for the purpose of providing a polyester resin composition exhibiting excellent impact resistance and moldability for a plastic container as taught by Taniguchi et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified JP '517 by using a polyester resin composition as taught by Taniguchi et al. in order to provide a polyester resin composition exhibiting excellent impact resistance and moldability for a plastic container.

Although JP '517 is silent as to whether the laminated plastic molded body is cylindrical, it is notoriously well known in the art that molded containers are commonly molded into cylindrical containers. Furthermore, Hahn teaches a method for producing biaxially oriented hollow containers (see Abstract; Figs. 8-9). Hahn teaches that the method can be used for polyesters including polyethylene terephthalate as well as polyolefins (Col. 4, line 55 to Col. 5, line 2). Hahn biaxially orients the molded layers of the hollow article for the purpose of enhancing the strength properties of the container (Col. 1, lines 13-25). The final product as taught by Hahn is a cylindrical molded container (Figs. 8-9). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicant's invention was made to have biaxially oriented the plastic layers of a container wall and molded the plastic layers into a cylindrical container for the purpose of enhancing the strength properties of the container as taught by Hahn.

Art Unit: 1772

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified JP '517 by biaxially orienting the layers of the laminated plastic body of the container and molding the layers into a cylindrical container as taught by Hahn for the purpose of enhancing the strength properties of the container.

Response to Remarks

6. Pursuant to the Applicant's remarks and amendment, the Examiner has withdrawn the claim objections and 35 U.S.C. 112 rejections from the previous office action, paper no. 9.

7. Applicant's arguments filed October 25, 2002 have been fully considered but they are not persuasive.

First, in reference to the Applicant's contentions regarding JP 517, the Examiner agrees in part. The Applicant's state that, "In particular, in the structure of JP 517, the disclosure of using PET as a resin material is only with respect to the base material layer. When PET is used, it is used as a base material, with the innermost layer being polyethylene resin... Thus, at most, JP 517 teaches a resin structure that may be compared to the claimed invention as B-A-B, not the claimed A-B-A." The Examiner agrees that JP 517 teaches PET layers constituting the outermost base layers in a 3-layered structure (see p.10 of the translation, paragraph [0033] wherein "base-material layer" is defined as the outermost layer), thereby rendering the middle layer to be the polyolefin layer. The Examiner does not understand the Applicant's contention that this would constitute a B-A-B relationship. The claim language of claim 1 clearly defines resin layer A to be PET and resin layer B to be polyolefin wherein layer B is interposed between layers of A – thus resulting in a PET – Polyolefin – PET film. This is the same relationship

Art Unit: 1772

taught by JP 517 and the Applicant's confirm this arrangement. Therefore, the claimed limitations of the A-B-A relationship are clearly anticipated by JP 517.

In response to the Applicant's contentions regarding JP 517 in view of Taniguchi and Hahn, the Examiner respectfully disagrees with the applicant's remarks. The Applicants contend that the teachings of Taniguchi are irrelevant and that Hahn fails to overcome the deficiencies of JP 517, thereby rendering the claimed invention non-obvious over the prior art. As noted above, however, JP 517 anticipates the A-B-A structure as claimed by the Applicants and fails to have "deficiencies" as the Applicant contends. Taniguchi further teaches a composition of a PET film layer that is impact resistant and moldable – two properties desired in the PET layer teachings of JP 517 – and thus motivation exists to modify JP 517 in view of Taniguchi. Therefore, the modification of JP 517 in view of Taniguchi results in composite layers with compositions within the Applicant's claimed ranges and the Examiner maintains the validity of the rejection.

In response to the Applicant's contentions regarding JP 960, JP 919, Taniguchi, and Hahn, the Examiner respectfully disagrees with the Applicant's remarks. The Applicant's primary contention regarding the teachings of JP 960 is that JP 960 fails to explicitly anticipate film laminate structures of PET-PO-PET and PET-PO-PET-PO-PET and instead allows for a wide range of combinations including EVA and MX nylon. The mere fact that JP 960 anticipates a wide range of combinations, however, is irrelevant. JP 960 states that an internal layer of PO is selected with outer layers selected from PET, EVA, and MX nylon. Therefore, any combination of PO with the aforementioned outer layers is anticipated by JP 960 – including PET-PO-PET. The Applicant further contends that proper motivation to modify JP 960 in view of JP 919 (the use of cyclic olefin) was not provided. Given that both prior art references are

Art Unit: 1772

directed at rigid, impact resistant film layers for containers, the Examiner maintains that motivation exists as noted in the previous office action, i.e., it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have modified JP '960 by using a cyclic polyolefin in the range of 5-60 mol% for the central polyolefin layer of the multilayered container as taught by JP 919 in order to attain excellent transparency, steam barrier nature, thermal resistance, and rigidity. Also note that the test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971) – thus, regardless of whether JP 919 is directed towards a single-layered material, the prior art teachings of the two references are to be taken as a whole, and taken as a whole, it would have been obvious to modify JP 960 in view of JP 919 for the previously mentioned reasons. In view of the aforementioned analysis, the Examiner further contends that the obviousness type modifications of JP 960 in view of Taniguchi and Hahn remains proper (see analysis of Taniguchi and Hahn provided above).

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 1772

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BPE
January 10, 2003



HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/10/03